Department of Maternal Welfare

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THE EVALUATION OF PRENATAL CARE*

IN VIEW of the increasing interest in maternal morbidity and mortality and the emphasis placed on prenatal care by physicians and administrative groups in general and obstetricians in particular, the recent report by Drs. Tyler, Watkins, and Walker is particularly significant. Their study is an attempt to evaluate quantity and quality of prenatal care. The specific question for which the answer was sought is stated thus: "If all other contingent factors are the same, what, if any, is the effect on the survival of the mother of various services described as prenatal care?"

Under careful supervision the records of 285 ward deliveries taking place in the New Haven Hospital, and 930 ward and out-patient delivery records of the Boston Lying-In Hospital were subjected to very careful scrutiny and statistical juggling.

Elaborate four-page record forms for compilation of data were used. From data so obtained patients were grouped accordingly as they received adequate or inadequate prenatal care. It is pointed out that the term "inadequate care" rather than "no care" was used because so few patients can be found among deliveries of a high grade maternity service who have had no prenatal care.

After careful grouping according to quantitative standards of prenatal care received, the groups thus resulting were balanced with reference to age, parity, plurality, legitimacy, color, race, economic status, and time of year. Comparison was thus secured at the expense of decided diminution in group numbers, serious but perhaps unavoidable objection to the study.

The balanced groups thus obtained were then subjected to searching analysis of complications of pregnancy and labor and the outcome of delivery. "The groups were found to be strongly influenced in the first outcome by a lack of balance revealed in complications of pregnancy. Apparently, women who have knowledge of some previous impending complication bestir themselves to obtain considerable care and attention. Conversely, those who have gone through former pregnancies without difficulty, or have otherwise found no reason for fear, appear often to neglect proper prenatal care, and will accordingly be classed in the B or intermediate group." (A, adequate prenatal care. B, inadequate and C, intermediate.) "To adjust for this a final balancing of the A and B groups with respect to complications of pregnancy was carried out with the large Boston case series. The excess of each complication (in one group or the other) was removed through random withdrawal by lot from all those who had that particular complication. A final recheck of age, parity and the like was then made to insure that balance of those factors had not been unduly disturbed. The end result was the formation of two comparable groups (A and B) differing only in the degree of prenatal care received, in which groups the course of labor and the final outcome could be studied."

*Report on the Evaluation of Prenatal Care, by Drs. Tyler, Watkins and Walker, Yale University School of Medicine. Published by the Institute of Human Relations, New Haven, Conn., 1934.

The report is interesting, timely and significant. It is well written and apparently fulfills necessary statistical requirements. From data obtained the authors draw certain conclusions, most significant of which is their failure to demonstrate benefits of prenatal care. While the conclusions drawn are doubtless tenable on the basis of data studied, I cannot believe it correctly evaluates prenatal care. In the first place, the study is a comparison of groups receiving prenatal care and frequency or number of prenatal visits is not always a safe index to its quality. Second, whether the number of records studied is adequate may be seriously questioned. The benefits accruing to patients from prenatal care can be ascertained only by comparing with large groups not so fortunately cared for. Furthermore, many complications of pregnancy are uncommon and no satisfactory evaluation of prenatal care in these cases can be hoped for except through analysis of very large groups. It is unfortunate that the basis for comparison in the series studied was not more satisfactory. The doubt and misunderstanding engendered by this report may delay but will not prevent a healthy development of prenatal care.

That prenatal care fails to accomplish a marked reduction in the number of complications at the time of delivery, is not surprising. In general with the exception of deformities, toxemias, and complications arising from coexisting disease (tuberculosis, nephritis, heart disease, etc.), most delivery complications cannot be foreseen. Recognition of abnormalities during pregnancy does not necessarily minimize the problems to be faced at the time of delivery. Knowledge of these threatening potentialities is nevertheless worth while even though we cannot always use it to advantage—an indication, perhaps, of shortcomings in the management of labor rather than futility of prenatal care. Such complications as placenta previa and premature separation are not prevented by prenatal care, but such care is likely to render patients more awake to untoward symptoms and therefore lead to earlier application of remedial measures.

If prenatal visits do no more than give the patient confidence and moral support during pregnancy such care still would be worth the effort. It does much more than this, however, for as pointed out in the preface to this report, "... experience of hospital and home delivery maternity services in England and in this country is quite uniform to the effect that maternal mortality, the incidence of stillbirths, and the neonatal mortality are lower when the expectant mother has had appropriate prenatal supervision, at least during the last three months of pregnancy, than is the case when women of similar parity, age, race, and economic status; and with comparable obstetric and aftercare, are delivered without having had the benefit of the medical and nursing supervision. In such conditions as syphilis in the expectant mother and in women with contracted or deformed pelves, the value of prenatal medical examination is so great as to be beyond dispute." The many intangible benefits which acrue to patients from adequate prenatal care are probably not accessible for statistical measurement. Prenatal care has not been overemphasized, but there is abundant evidence to show that care at the time of delivery and thereafter has been greatly underemphasized.

A pertinent point brought out in this study is that: "Negative prenatal care benefits throughout our several projects have been interpreted as substantiating the growing feeling that obstetric care at labor may play by far the greatest rôle in improvement of maternity outcome. If this be true, prenatal care can render a signal service by directing pregnant women to make arrangements for a high quality delivery service."

No amount of prenatal care can compensate for poor care at the time of delivery, but good care at the time of delivery can often compensate for lack of prenatal care and can be the most potent single factor for good or bad obstetrics.

—*Norman F. Miller, M.D.*